

# Environmental Assessment Fueling Facilities

Joint Base Lewis-McChord, *Washington*

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**Joint Base Lewis McChord**  
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**US Army Corps  
of Engineers**®  
Seattle District

**ENVIRONMENTAL ASSESSMENT  
FUELING FACILITIES  
JOINT BASE LEWIS MCCORD, WASHINGTON**

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## Abbreviations and Acronyms

ADP	Area Development Plan
AEC	Army Environmental Command
APE	Area of Potential Effect
AR	Army Regulation
AST	Aboveground storage tank
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH <sub>4</sub>	methane
CO, CO <sub>2</sub> , CO <sub>2-e</sub>	Carbon monoxide, Carbon Dioxide, Carbon Dioxide-equivalent
COR	Contracting Officer Representative
DLA	Defense Logistics Agency
DoD	Department of Defense
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
GAAF	Gray Army Airfield
GHG	Green House Gas
GO-CO	Government Owned – Contractor Operated
HAP	Hazardous air pollutants
HTRW	Hazardous, Toxic and Radioactive Waste
HFC	hydrofluorocarbons
INRMP	Integrated Natural Resources Management Plan
JBLM	Joint Base Lewis McChord
LPG	Liquid petroleum gas
Lewis – North	Sites and military units on JBLM north of I-5
Lewis – Main	Sites and military units located on main area of JBLM
MBTA	Migratory Bird Treaty Act
MOGAS	Motor gasoline

MSS	Military Service Station
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOC	Notice of Construction
NO <sub>2</sub> , N <sub>2</sub> O	Nitrogen dioxide, nitrous oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O & M	Operations and Maintenance
PFC	perfluorocarbons
PM <sub>x</sub>	Particulate matter less than x microns in diameter
POL	Petroleum, oil, and lubricants
PSCAA	Puget Sound Clean Air Agency
ROI	Region of Influence
SF <sub>6</sub> , SO <sub>2</sub>	sulfur hexafluoride, sulfur dioxide
SIP	State Implementation Plan
SPCCP	Spill Prevention Control and Countermeasure Plan
S-BA	Supplemental Biological Assessment
TCE	trichloroethylene
UFC	Unified Facilities Criteria
µg	microgram
USFWS	United States Fish and Wildlife Service
UST	Underground storage tank
UXO	Unexploded Ordinance
WDFW	Washington Department of Fish and Wildlife
WDOE	Washington Department of Ecology

## 1 1.0 Purpose of and Need for the Proposed Action

### 2 1.1 Introduction

3 The United States (U.S.) Department of the Army (Army) has prepared this Environmental  
4 Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969 (42  
5 U.S. Code [USC] §4321-4370h), as implemented by the Council on Environmental Quality  
6 (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508); and Army  
7 regulations for implementing NEPA (32 CFR Part 651).

8 The Army proposes to construct three retail fuel facilities on three sites within the boundaries of  
9 Joint Base Lewis-McChord (JBLM), Washington. In addition, three older fuel facilities that are  
10 no longer up to standard or required will be demolished. The Defense Logistics Agency (DLA)  
11 is a cooperating agency on this project.

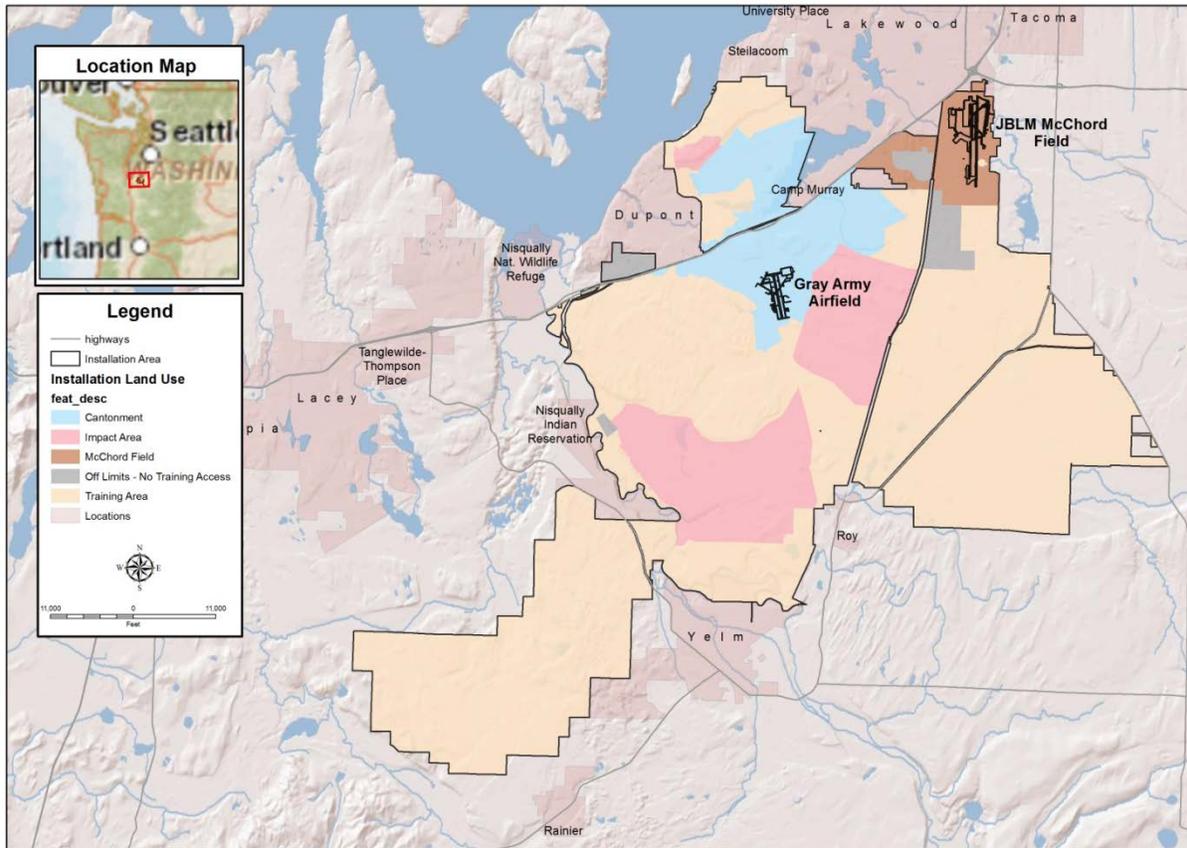
12 The two approved Environmental Impact Statements (EIS) that were the basis for improving fuel  
13 facilities at JBLM are fully incorporated by reference into this EA in accordance with CEQ  
14 regulations implementing NEPA at 40 CFR Part 1502.21. The comprehensive decision making  
15 process that the two EISs present are the basis of programmatic operations and facility  
16 information on JBLM. The two EISs are:

- 17 • Final EIS for the Fort Lewis Army Growth and Force Structure Realignment, July 2010  
18 (JBLM 2010)
- 19 • Final Programmatic EIS for the Realignment, Growth and Stationing of Army Aviation  
20 Assets, February 2011 (U.S. Army Environmental Command (AEC) 2011).

### 21 1.2 Location

22 JBLM is located in Washington State and occupies portions of Pierce and Thurston Counties in  
23 the western portion of the state along the Interstate 5 corridor (Figure 1-1). JBLM is  
24 approximately 45 miles south of Seattle and 15 miles south-southwest of Tacoma. JBLM is the  
25 west coast's largest military installation covering a total area of 90,836 acres. There are two  
26 airfields located within JBLM, McChord Airfield in the northeast corner and Gray Army Airfield  
27 (GAAF) in the central area. GAAF occupies approximately 600 acres in what is known as the  
28 cantonment area and is used by fixed-wing aircraft and helicopters.

29 The six fuel sites are located in or near four general areas of JBLM (Figure 1-2). Two sites are  
30 in Lewis-North, one is adjacent to GAAF, two are in the Lewis-Main area, and the sixth site is  
31 further north and east in the JBLM–Main area.



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Figure 1-1. General location map of JBLM

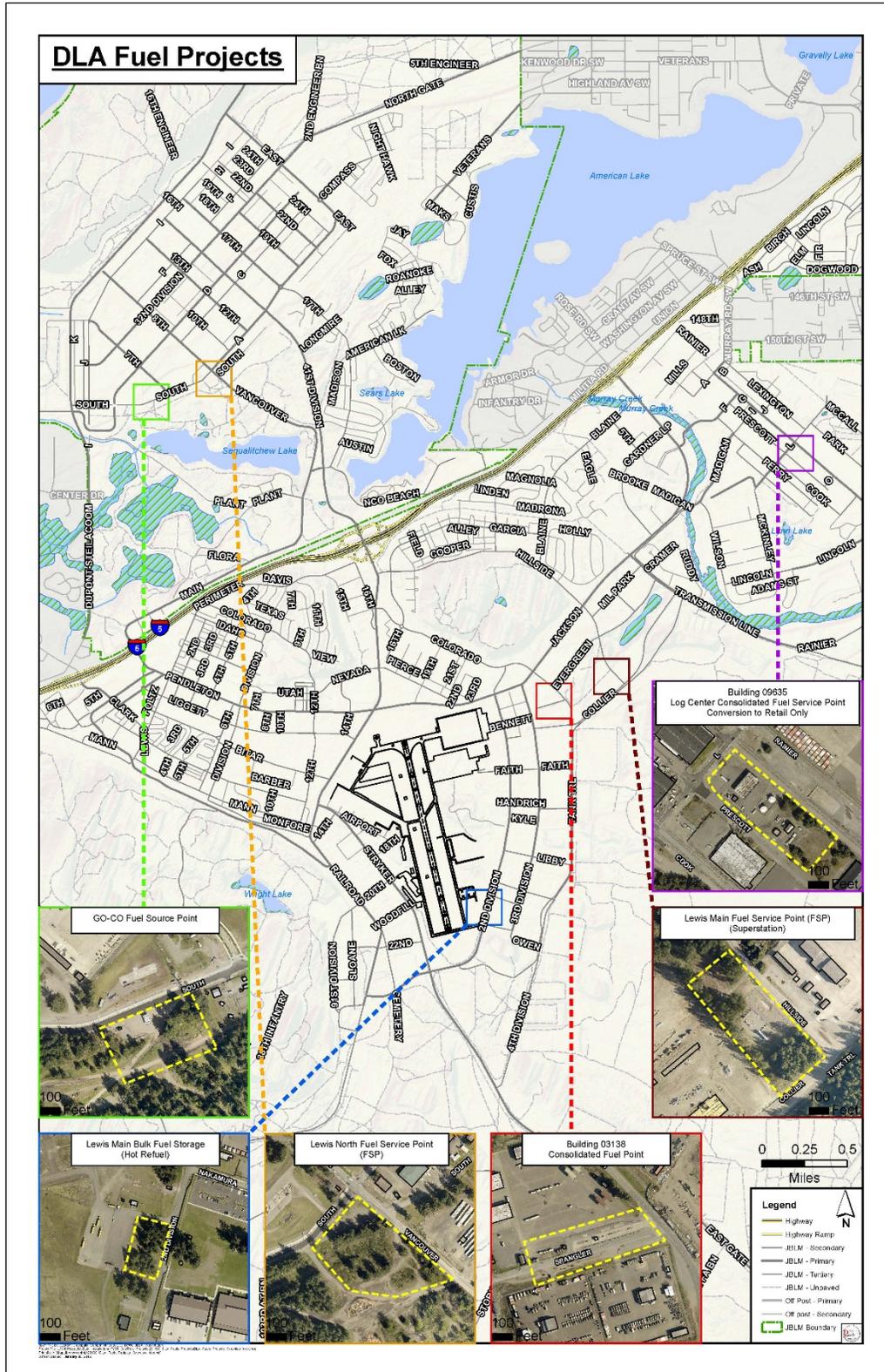


Figure 1-2. Locations of the six proposed fuel projects on JBLM, Washington

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### 1 **1.3 Background**

2 JBLM is a training and mobilization center for all services and is the only Army power-projection  
3 base west of the Rocky Mountains. U.S. Northern Command (US NORTHCOM) expects JBLM  
4 to deliver strategic support from a Defense Support of Civil Authorities perspective that cannot  
5 be met with the current facilities on JBLM. The Installation Status Report – Infrastructure  
6 indicates the land vehicle capacity of the current infrastructure can service only 15 percent of  
7 the units that call JBLM home. Compared to the Unified Facilities Criteria (UFC) 3-460-01  
8 standard of having a dispenser for every 100 vehicles, facilities at JBLM were found to be  
9 undersized for the current need. The undersized facilities promote a safety hazard as tactical  
10 vehicles block traffic by queuing on adjacent streets while waiting for service. Units are  
11 refueling in their motor pools, which increases environmental risk for Commanders since the  
12 facilities aren't designed to support those types of operations (e.g., level of spill control).

13 Currently, fuel tanker trucks are limited to fueling two tankers trucks at a time at JBLM's only  
14 bulk fuel loading facility (9635/9636). For the brigades located on Lewis – North, this round trip  
15 task takes over an hour and requires the tanker trucks to travel through the cantonment area.  
16 Facility 9635/9636 has additional UFC 3-460-01 and National Fire Protection Association  
17 (NFPA) 30A violations: (1) bulk and retail tanks tied together performing bulk and retail functions  
18 and (2) the bulk tanks at this facility are located too close (less than 50 feet) to the active railway  
19 spur. Current fueling points are not designed efficiently for either bulk or retail functions.

20 Direct aircraft fueling (hot fueling) is essential for training the Aviation Brigade on safe  
21 procedures to refuel aircraft with motors running. A temporary hot refuel system is currently  
22 used to train hot refueling on two of the existing concrete pads. The temporary system is  
23 unsafe and inefficient. Aircraft wheels cannot cross the fuel lines so helicopters must hover  
24 over the lines around the taxiways to and from the hot fuel points. Propeller wash blows the fuel  
25 lines and sand bags out of place. In addition, all aircraft must be refueled using tanker trucks,  
26 which shuttle fuel between bulk fuel storage at the Logistics Center and the flight aprons where  
27 aircraft are parked. Each round trip takes approximately 50 minutes resulting in increased man-  
28 hours spent on refueling and longer aircraft turn-around times. Use of multiple tanker trucks  
29 increases operational risk by repeated maneuvering of ground vehicles around aircraft wingtips.  
30 Use of tanker trucks increases the possibility of fuel spills and accidents. It increases vapor  
31 emissions, and operating and maintenance costs for the refueling fleet. There is substantial  
32 increased operational risk and possibility of environmental contamination with continued use of  
33 the temporary hot fueling system.

34 It is not feasible to reconstruct the three existing hot fuel points due to multiple issues including:  
35 the western aircraft parking position is too close to the parallel taxiway and does not meet clear  
36 zone requirements; the width of the taxiways surrounding the three hot fuel points do not meet  
37 current criteria for aircraft that use GAAF, the pavement width is less than half what is required;  
38 removal of existing fuel lines, and construction of new fuel lines will require demolition of much  
39 of the existing concrete pads, taxiways, and hydrant pits.

### 40 **1.4 Purpose of and Need for the Proposed Action**

41 The purpose of this project is to provide dependable and convenient fuel storage and  
42 dispensing facilities on JBLM Lewis-Main, JBLM Lewis-North, and GAAF, and to support  
43 installation and transient tactical and non-tactical vehicles and aircraft. In addition the Aircraft  
44 Direct Refueling System on GAAF will allow hot refueling of all Army helicopters utilizing the  
45 airfield. The existing facilities do not provide effective fueling services for existing users. The  
46 goal is to provide an environmentally safe long-term source for fueling vehicles and aircraft by  
47 replacing outdated, undersized, and poorly located facilities.

1 These projects are required to provide safe, efficient, expeditious, and operative means to fuel  
2 Department of Defense (DOD)/Army aviation and ground equipment, supporting five Brigade  
3 Combat Teams and one Aviation Brigade. The new facilities will replace existing facilities that  
4 are undersized, non-compliant, and pose health, safety, and environmental risks to the  
5 installation and users. Demolition of older facilities will remove the obsolete equipment and  
6 prepare the sites for future reuse or return to native conditions.

7 If the bulk system improvements, tanker dispensing, and hot refuel facility is not provided, all  
8 aircraft would continue to need to be fueled from fuel trucks, which causes longer operation  
9 periods due to cool down start-up cycle and long lead for trucks to travel to and from the current  
10 inadequately sized bulk storage area. Greater travel time and mixing with installation traffic  
11 increases hazard for spill contamination. Without the capability to hot refuel, aircraft required  
12 downtime to cool prior to refueling which results in time lost for training. In addition, JBLM  
13 crews will not receive critical training needed for wartime missions, peacekeeping missions, and  
14 homeland defense. Hot refueling is an inherently hazardous operation that requires a great deal  
15 of situational awareness, attention to detail and speed. Providing an engineered permanent hot  
16 refuel point that complies with UFC 3-260-01, *Airfield and Heliport Planning and Design*,  
17 reduces the inherent dangers of hot refueling.

18 If this project is not implemented, combat vehicles will continue to struggle to meet timely  
19 mission requirements. Additional travel required for refueling will increase wear and tear on  
20 equipment and roads, increase safety risk, as well as waste time and fuel. Units will continue to  
21 risk refueling in motor pools not designed for a refueling mission. NFPA 30A and UFC 3-460-01  
22 violations listed earlier will not be addressed nor the safety concerns with backed up retail  
23 refueling at the current facilities since new facilities are the only way to mitigate this risk. I  
24 Corps and Special Operations units would fail to receive mobile efficient refueling operations on  
25 JBLM, which could be detrimental to their mission capabilities.

## 26 **1.5 Laws, Regulations, Permits, and/or Other Consultation Requirements that** 27 **Influence the Proposed Action**

28 This EA will analyze the potential environmental effects of two alternatives: the Proposed Action  
29 and a No Action Alternative. The document analyzes direct effects (those caused by the action  
30 and occurring at the same time and place) and indirect effects (those cause by the action and  
31 occurring later in time or farther removed in distance, but that are still reasonably foreseeable).  
32 The potential for cumulative effects (effects resulting from the incremental impact of the action  
33 when added to other past, present, and reasonably foreseeable future actions) is also  
34 addressed, and mitigation measures to avoid, minimize, rectify, reduce, or compensate for  
35 impacts are identified, where appropriate.

## 36 **1.6 Relationship to Statutes, Regulations, and Policies**

37 The intent of this EA is to comply with NEPA by assessing the potential impacts of fueling facility  
38 infrastructure construction and demolition at JBLM. Additional guidance for NEPA compliance  
39 and for assessing impacts is provided in the CEQ Regulations for Implementing the Procedural  
40 Provisions of NEPA (40 CFR Parts 1500-1508), and Environmental Effects of Army Actions (32  
41 CFR Part 651).

42 Army decisions that affect environmental resources and conditions also occur within the  
43 framework of numerous laws, regulations and Executive Orders (EOs). Some of these  
44 authorities prescribe standards for compliance; others require specified planning and  
45 management actions, the use of which is designed to protect environmental values potentially

1 affected by proposed training operations. Laws and related regulations bearing on the  
2 proposed Army actions include, but are not limited to:

- 3 • Clean Air Act (CAA) (42 USC 7401 *et seq.*);
- 4 • Clean Water Act (CWA) (33 USC 1251 *et seq.*);
- 5 • National Historic Preservation Act (NHPA) (16 USC 470 *et seq.*);
- 6 • Endangered Species Act (ESA) (16 USC 1531 *et seq.*);
- 7 • Migratory Bird Treaty Act (MBTA) (16 USC 703-712);
- 8 • Bald and Golden Eagle Protection Act (16 USC 668-668d);

9 EOs bearing on proposed Army actions include:

- 10 • Executive Order (EO) 13175, Consultation and Coordination with Indian Tribal  
11 Governments
- 12 • EO 12898, Federal Actions to Address Environmental Justice in Minority and Low-  
13 income Populations;
- 14 • EO 11990, Protection of Wetlands;
- 15 • EO 13045, Protection of Children from Environmental Health Risks and Safety Risks;
- 16 • EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds;
- 17 • EO 12088, Federal Compliance with Pollution Control Standards; and
- 18 • EO 13148, Greening the Government through Leadership in Environmental  
19 Management.

20 Army actions are also governed by DOD, Army and JBLM regulations, including the following:

- 21 • Army Regulation (AR) 200-1 (Environmental Quality – Environmental Protection and  
22 Enhancement; December 13, 2007)
- 23 • JBLM Regulation 200-1 (Environmental Protection and Enhancement; November 1,  
24 2004)
- 25 • JBLM Regulation 360-5 (Army Public Affairs – JBLM Noise and Vibration Complaint  
26 Procedure; March 13, 1998)
- 27 • AR 420-1 (Army Facility Management)
- 28 • JBLM Regulation 420-5 (Procedures for the Protection of State and Federally Listed  
29 Threatened, Endangered, Candidate Species, Species of Concern, and Designated  
30 Critical Habitat; August 9, 2004)

## 31 **1.7 Public Involvement**

32 The premise for NEPA is that providing information to the decision-maker and the public will  
33 improve the quality of final decisions concerning the environmental effects of federal actions. All  
34 persons who have a potential interest in the proposed action, including minority, low-income,  
35 and Native American groups, are urged to participate in the Army's environmental impact  
36 analysis process conducted under NEPA.

37 The formal opportunity to comment involves a 30-day period for public review of the draft EA  
38 and draft Finding of No Significant Impact (FONSI). The Notice of Availability (NOA) of the draft  
39 EA will be mailed electronically and/or hard copy to known stakeholders and interested parties.  
40 The NOA will also be publicized on the JBLM website. The draft EA will be available for  
41 download from the JBLM website ([http://www.lewis-  
42 mcchord.army.mil/publicworks/sites/envir/eia.aspx](http://www.lewis-mcchord.army.mil/publicworks/sites/envir/eia.aspx)).

1 The Army will review comments received during the public comment period to determine  
2 whether the proposed action has potentially significant impacts that could not be mitigated to  
3 less than significant. If impacts were found to have the potential to be significant after the  
4 application of mitigation measures, the Army would be required to publish a notice of intent to  
5 prepare an EIS in the Federal Register. If the EA results in the FONSI, the approved FONSI will  
6 be made available to the public prior to initiation of the proposed action, in accordance with 40  
7 CFR 1506.6. If the EA does not result in a FONSI and there is no decision to prepare an EIS,  
8 the proposed action is cancelled and there is no notification requirement.

9

10

## 1 **2.0 Proposed Action and Alternatives**

2 Alternatives considered under NEPA must include the proposed action (Preferred Alternative),  
3 and the No-Action alternative. The No Action alternative is included as a means of comparison  
4 to the action alternative to help distinguish the relative merits and disadvantages between  
5 alternatives. In order for any alternative to be acceptable for consideration it must meet the  
6 purpose and need for action. Pursuant to Army Regulation 32 CFR 651, Environmental  
7 Analysis of Army Actions, the selected alternative must meet the project purpose and need and  
8 it should be environmentally acceptable, to the extent possible.

### 9 **2.1 Selection Criteria**

10 Potential alternatives that meet the purpose and need were evaluated against the following  
11 selection criteria:

- 12 • Proximity to training areas, point of use
- 13 • Land area sufficient to facilitate the number and size of fuel tanks proposed to meet  
14 mission requirements; three to four acres are required.
- 15 • GAAF flight safety zones
- 16 • Safety zones surrounding ground training areas
- 17 • Avoidance of drinking water well heads
- 18 • Avoidance of environmentally sensitive areas

### 19 **2.2 No Action Alternative**

20 Under the No Action Alternative, all fuel facilities would be left in place and existing conditions  
21 would persist. This alternative assumes that decommissioning/demolition and/or construction  
22 would not occur at any or all of the six sites. As required by CEQ guidelines, the No Action  
23 Alternative is carried forward as a baseline for the analysis in this EA.

### 24 **2.3 Proposed Action**

25 The Army proposes to construct bulk storage and retail fuel facilities on JBLM Lewis-Main and a  
26 retail fuel service station on JBLM Lewis-North to support all installation and transient tactical  
27 and non-tactical vehicles and aircraft. Facilities will include administrative space, bulk storage  
28 tanks, and fueling stations. In addition the Army proposes to construct an aircraft refueling  
29 facility, with fuel tanker and direct refuel (hot refuel) capability, consisting of bulk fuel storage, in-  
30 field tanker dispensers, a fuel hydrant system, pumps and filters, pump house, and an  
31 operations building for the helicopter hot refuel points at GAAF. Supporting facilities in the  
32 proposed construction include utilities, electric service, paving, storm drainage, oil water  
33 separators, on-site subsurface infiltration, and site improvements.

34 With construction of the new fuel stations, the three existing fuel facilities with equipment that is  
35 no longer up to modern standards will be decommissioned and demolished.

### 36 **2.4 Alternatives Considered but Eliminated from Further Analysis**

37 Alternate sites on JBLM were considered as locations for the fuel service and storage sites.

#### 38 **2.4.1 Expansion of existing retail fuel stations**

39 Expansion of existing sites were considered; however, they did not meeting the land area  
40 requirement of three to four acres. The larger land area is required to meet demand for

1 increased capacity of both varieties of fuels and vehicular use, as well as room to construct  
2 required stormwater drainage improvements. The current facilities range in size from one to two  
3 acres, which was determined to be insufficient. This alternative was eliminated from further  
4 consideration because the current GO-CO facility in Lewis-North does not have room for  
5 expansion due to safety zones around ground training areas.

#### 6 **2.4.2 Superstation Construction at the 4<sup>th</sup> Division Drive Storm debris stockpile area**

7 This site was considered as a location for one of the superstations; however, it was dismissed  
8 due to proximity to the mitigation area for federally threatened streaked horned larks  
9 (*Eremophila alpestris strigata*) and GAAF flight safety zones.

### 10 **2.5 Alternative Carried Forward for Analysis**

11 The Army proposes to construct three retail fuel facilities on three sites within the boundaries of  
12 JBLM. After the new facilities are operational, the three older fuel facilities that are no longer up  
13 to standard will be demolished. The proposed action includes three separable construction  
14 projects: 1) Lewis-Main Retail “Superstation”, 2) Lewis-North Retail Station, and 3) GAAF Bulk  
15 Fuel Storage and Hot Refuel. Construction at Lewis-Main “Superstation” (1) and GAAF (3)  
16 would include demolition of the existing infrastructure. Each construction project includes a  
17 demolition component, whether on the same location or facilities at another location on the  
18 base.

#### 19 **2.5.1 Lewis-Main Fuel Service Point**

20 This project will construct a new Military Service Station (MSS). The 5.0 acre site is currently  
21 developed as a liquid petroleum gas (LPG) storage and distribution facility (Facility 3387) but  
22 has never been used. The site has an asphalt road, 30,000 gallon above ground storage tank  
23 (AST), concrete pads, fencing, and supporting mechanical and electrical equipment. The  
24 existing LPG tank and the entire associated infrastructure would be removed, and then the new  
25 fuel station would be constructed. New features would include:

- 26 • 2- 12,000 gallon F24 AST
- 27 • 1 - 12,000 gallon diesel AST
- 28 • 1 - 12,000 gallon motor gasoline (MOGAS) AST
- 29 • 1 - truck off-load point
- 30 • 9 - retail fuel dispensers
- 31 • 1 - petroleum, oil, lubricants (POL) operations building
- 32 • 1 - canopy over dispenser area (or multiple smaller canopies at each dispenser)
- 33 • Supporting facilities include pavement, site lighting, stormwater management, and a spill  
34 containment system.

35 Construction is expected to start in the spring of 2021 and is expected to take 1.5 years to  
36 complete.

#### 37 **2.5.2 Lewis-North Retail Station site**

38 This project would construct a new MSS on a 4.5 acre site to improve fuel services for the  
39 northern areas of JBLM. New features would include:

- 40 • 1 - 20,000 gallon F24 AST
- 41 • 1 - 12,000 gallon MOGAS AST
- 42 • 1 - 12,000 gallon diesel AST
- 43 • 1 - Truck offload point

- 1 • 11 - retail fuel dispensers
- 2 • 1 - POL building
- 3 • 1 - canopy over dispensers(or multiple smaller canopies at each dispenser)
- 4 • New paving to cover approximately 3 acres
- 5 • Supporting facilities include pavement, site lighting, stormwater management, and a spill
- 6 containment system.

7 After the Lewis-North Retail Station is operational, the 3 acre GO-CO Fuel Source Point (Bldg  
8 1150), 0.4 miles away on South Drive, would be demolished in its entirety, and the site would be  
9 returned to a native state. Items to be removed include:

- 10 • Building 1150
- 11 • Retail dispensers (fuel pumps) and piping
- 12 • Bulk loading equipment
- 13 • 3 USTs
- 14 • Canopy
- 15 • Pavement
- 16 • Oil water separator

17 This project would be constructed in conjunction with the Lewis-Main Fuel Service Point project  
18 and on the same time line.

### 19 **2.5.3 GAAF Bulk Fuel Storage and Hot Refuel**

20 This project will construct new facilities to hot fuel military aircraft and tactical vehicles within the  
21 boundaries of GAAF. The site has the remains of a hot fuel system (Facility 3477) that was  
22 operational from 1992 to 2001. This system was damaged in the Nisqually Earthquake in 2001,  
23 and was removed or decommissioned between 2001 and 2004. Current facilities and  
24 infrastructure would be demolished, and existing vegetation within the footprint would be cleared  
25 (grass and 50-yr old trees). Fuel deliveries will be off-loaded outside the airfield perimeter  
26 fence.

27 Demolition work would consist of:

- 28 • Existing pavement consisting of helipads, taxiways, and parking areas (5.6 acres paved)
- 29 • Underground piping
- 30 • Building P3477 (after new POL building is operational)
- 31 • Fencing
- 32 • Clearing and grubbing of vegetation - grass and trees

33 Construction work consists of:

- 34 • Asphalt taxiways, shoulders, infield, roadways, and parking areas to total approximately
- 35 8 acres of paved surfaces. This pavement includes approximately 5.5 acres for the
- 36 helipads and hot refueling points
- 37 • 4 - 50,000 gallon F24 ASTs
- 38 • 1 - 5,000 gallon diesel AST
- 39 • 1 - Pump house building
- 40 • 1 - POL operations building
- 41 • Underground piping
- 42 • 2 - truck offload points
- 43 • 2 - truck fill stands
- 44 • 1 - canopy over load/offload area (or smaller canopies over equipment)

- 1       • Supporting facilities include: mechanical and electrical equipment; security fence; site  
2       lighting; stormwater drainage, and spill containment systems.

3 Construction on this fuel station is expected to start in the spring of 2020 and is expected to take  
4 approximately two years to complete.

#### 5 **2.5.4 Demolition of Logistics Center Consolidated Fuel Service Point (Bldg 09635)**

6 The existing fuel storage tanks and associated piping would be removed, but undisturbed  
7 asphalt pavement would be left in place. Items to be removed include:

- 8       • 2 ATs  
9       • 3 Underground storage tanks (USTs)  
10      • Underground and above ground piping affiliated with the ASTs and USTs

11 Demolition and site repair would be completed during the years 2022-2023, after the Lewis-  
12 Main and Lewis-North projects are operational.

#### 13 **2.5.5 Demolition of Consolidated Fuel Point (Bldg 03138)**

14 After the Lewis-Main Retail Superstation (Section 2.5.2) is operational in approximately 2022 to  
15 2023, this military service station at 4<sup>th</sup> Division Drive and Spangler Avenue will be demolished  
16 and removed. All fueling equipment will be removed but undisturbed asphalt pavement and the  
17 perimeter fence will remain in place. Items to be removed include:

- 18       • Building 03138 in its entirety  
19       • Retail dispensers (fuel pumps) and piping  
20       • Bulk loading equipment  
21       • 3 USTs

### 22 **2.6 Design Measures, Current Practices, and Best Management Practices** 23 **(BMPs)**

#### 24 **2.6.1 Construction BMPs**

25 To minimize environmental impacts during construction the following BMPs will be implemented:

- 26       • Clearing of existing trees and shrubs will be accomplished prior to April 1 or after  
27       September 1 to minimize adverse effects to nesting birds.
- 28       • Timber removal activities would be coordinated with JBLM Public Works Forestry  
29       Department per AR 200-1, 4-3:d8(m).
- 30       • The use of dust suppression methods to minimize airborne particulate matter that would  
31       be created during any ground disturbing activities. Additionally, all equipment and  
32       vehicles would be required to be kept in good operating condition to minimize exhaust  
33       emissions. Standard practices, such as soil watering, keeping storage piles covered  
34       when not in use, limiting dusty work on windy days or times of day would be used to  
35       control fugitive dust during the construction phase and during daily operations and  
36       maintenance of the proposed project.
- 37       • To avoid or minimize impacts to noise, construction would occur during daylight hours,  
38       Monday through Saturday, except in emergencies. All equipment and vehicles would  
39       have properly working mufflers and be kept properly tuned to reduce backfires.

- 1 • Soil erosion-control measures, such as soil erosion-control mats, silt fences, straw bales,  
2 diversion ditches, riprap channels, water bars, or water spreaders, would be used as  
3 appropriate.
- 4 • Prior to construction starting, the contractor will complete a Stormwater Pollution  
5 Prevention Plan (SWPPP) and acquire A National Pollutant Discharge Elimination  
6 System (NPDES) Construction General Permit from the U.S. Environmental Protection  
7 Agency (EPA)
- 8 • Provisions would be taken to prevent pollutants from reaching the soil, groundwater, or  
9 surface water. During project activities, contractors would be required to perform daily  
10 inspections of equipment, maintain appropriate spill-containment materials on site, and  
11 store all fuels and other materials in appropriate containers. Equipment maintenance  
12 activities would not be conducted on the construction site.
- 13 • Equipment will not be allowed to idle longer than 15 minutes when not in use. All motor  
14 vehicles and equipment will have mufflers conforming to original manufacturer  
15 specifications that are in good working order and are in constant operation to prevent  
16 excessive or unusual noise, fumes, or smoke.
- 17 • Temporary safety fencing will be utilized to separate work zones from sensitive areas.  
18 USTs and ASTs should undergo the normal testing and decommissioning procedures for  
19 this process.
- 20 • Monitoring wells are located in the vicinity of proposed construction sites. Any  
21 monitoring wells will be shown on design drawings for protection during construction.
- 22 • The possibility exists that unexploded ordinance (UXO) could be encountered, although  
23 because of previous ground disturbance at Lewis North (GO-CO Fuel Source Point and  
24 Lewis-North Fuel Service Point) (located on the southern boundary of a former practice  
25 mortar range) the probability is reduced. On-call construction support would be available  
26 for the entirety of construction in the event that UXO is discovered.

## 27 **2.6.2 Operations BMPs**

28 To minimize environmental impacts during operation of the fuel stations, the following current  
29 practices and BMPs will be implemented:

- 30 • Bare ground will be reseeded as part of the final construction design along roadways,  
31 taxiways, and runways. This will allow natural dispersion of stormwater.
- 32 • Nozzles and hoses will be checked weekly for visible fuel leaks, and an inspection log  
33 will be kept.
- 34 • Any defective equipment will be removed from service until repairs can be made. The  
35 equipment defect will be reported immediately to the DWP Air Program Manager.
- 36 • A pressure-decay test will be completed every six months.
- 37 • Only certified technicians will do new installations, repairs, upgrades, and/or testing.
- 38 • All test reports will be kept at the station for at least two years after the testing date, and  
39 will be accessible for inspection.
- 40 • Check for external corrosion and structural failure in aboveground tanks. Inspect tank  
41 foundations, connections, coatings, tank walls, and piping systems. Look for corrosion,  
42 leaks, cracks, scratches, and other physical damage that may weaken the tank or  
43 container system.

- 1 • Check for spills and overfills due to operator error. At least one spill kit will be kept and  
2 readily available at each fuel station. Place and maintain emergency spill containment  
3 and cleanup kit(s) at outside areas where there is a potential for fluid spills. These kits  
4 should be appropriate for the materials and the size of a potential spill. Locate spill kits  
5 within 25 feet of all fueling/fuel transfer areas, including on-board mobile fuel trucks
- 6 • Check for failure of any piping systems.
- 7 • Check for leaks or spills during pumping of liquids or gases from a truck or rail car to a  
8 storage facility or vice versa.
- 9 • Promptly repair or replace all substantially cracked or otherwise damaged paved  
10 secondary containment, high-intensity parking, and any other drainage areas, subjected  
11 to pollutant material leaks or spills. Promptly repair or replace all leaking connections,  
12 pipes, hoses, valves, etc., which can contaminate stormwater.
- 13 • Visually inspect new tank or container installations for loose fittings, poor welds, and  
14 improper or poorly fitted gaskets.
- 15 • Above-ground tanks should be tested periodically for integrity by a qualified professional.
- 16 • Dry cleanup methods should be employed when cleaning up fuel-dispensing areas.  
17 Such methods include sweeping to remove litter and debris and using rags and  
18 adsorbents for leaks and spills. Water should not be used to wash these areas. During  
19 routine cleaning, use a damp cloth on the pumps and a damp mop on the pavement,  
20 rather than spraying with a hose.
- 21 • Clean oils, debris, sludge, etc. from all stormwater facilities regularly, including catch  
22 basins, settling/detention basins, oil/water separators, boomed areas, and conveyance  
23 systems to prevent the contamination of stormwater.
- 24 • Prevent the discharge of unpermitted liquid or solid wastes, process wastewater, and  
25 sewage to ground or surface water, or to storm drains that discharge to surface water, or  
26 to the ground. Conduct all oily parts cleaning, steam cleaning, or pressure washing of  
27 equipment or containers inside a building, or on an impervious contained area, such as a  
28 concrete pad. Direct contaminated stormwater from such an area to a sanitary sewer  
29 where allowed by local sewer authority, or to other approved treatment.
- 30 • Pressure wash impervious surfaces contaminated with oils, metals, sediment, etc.  
31 Collect the resulting washwater for proper disposal (methods would involve plugging  
32 storm drains, or otherwise preventing discharge and pumping or vactoring up  
33 washwater, for discharge to sanitary sewer or for vactor truck transport to a waste water  
34 treatment plant for disposal).
- 35 • Stencil warning signs at stormwater catch basins and drains, e.g., “Dump no waste –  
36 Drains to waterbody.”
- 37 • Do not flush or otherwise direct absorbent materials or other spill cleanup materials to a  
38 storm drain. Collect the contaminated absorbent material as a solid and place in  
39 appropriate disposal containers.
- 40 • An Operations and Maintenance (O&M) plan will be kept at each of the stations.

### 2.6.3 BMPs Specific to Protected Species on GAAF

Construction of the proposed project will take longer than six months and thus will occur during the streaked horned lark nesting period (April 1 through September 15). The following actions will be initiated to minimize impacts to nesting birds during construction activities:

- A 75 foot (23 meters) buffered area around new construction sites will receive management actions to discourage birds from nesting in the buffered area. This could include putting up a fence along the boundary of the buffered area, or grading the construction site. Any placement of material to discourage nesting would require approval from GAAF operations to address safety issues.
- The Army shall coordinate with the Service on pre-construction implementation plans and scheduling before contracts are awarded for upcoming projects.
  - Contract bidders shall be notified of the timing constraints and other criteria before accepting contracts.
  - Pre-construction implementation plans shall outline the nature of the upcoming construction activities, timing associated with each construction component, and identify which construction components can and will be done outside of the April 1 to September 15 seasonal restriction period.
  - The Army shall coordinate the pre-construction implementation plans with the Service at least 30 days before the start of construction to allow the Service time to review them and provide feedback.
- Surveys will be conducted to locate any nests within 164 ft (50 meters) of proposed construction activities.
- Maps of nest locations within 164 ft (50 meters) of construction boundary will be provided to the contracting officer representative (COR) for coordination with the contractor so that avoidance measures can be implemented to the greatest extent practical. Any activities impacting nests will be suspended or altered until nesting is complete (maximum of 35 days). Nests will be monitored throughout the nesting season to assure avoidance measures are successful in eliminating adverse impacts.
- When feasible, project activities will avoid the nesting period for the streaked horned lark (April 1 through September 15), or construction will start prior to the nesting season to help discourage nest establishment within 164 ft (50 meters) of construction sites.
- If a streaked horned lark establishes a nest within 164 ft (50 meters) of a construction project while construction activities are occurring, those activities can continue as long as no adverse effects are detected as a result of construction activity.
- Construction sites and buffer areas (less than 75 ft, 23 meters) that are graded shall also be compacted unless all construction work (paving, etc.) is completed outside of the extended nesting season (April 1 through September 15). If a project spans several seasons (i.e., left vacant over a growing season), the site may need to be graded and compacted again to maintain the site in unsuitable condition for nesting and reduce the risk of fledglings entering vegetated areas and being crushed.
  - The construction site shall be monitored and ensure the site remains in unsuitable condition (un-vegetated) between April 1 through September 15.
- All equipment shall be staged on paved or recently graded and unoccupied areas (this may require surveys). Equipment shall not be within 50 meters (164 ft) of vegetated

- 1 areas or edges of taxiways/runways, or anywhere that streaked horned larks may build  
2 nests (i.e., in gravelly taxiway margins).
- 3 • Barriers shall be installed before construction sites are graded and shall not be installed  
4 between April 1 through September 15. Barriers must remain in place from April 1  
5 through September 15, or until construction is completed.
  - 6 • Barrier pieces shall be installed 1 to 3 feet apart to allow flightless young to pass through  
7 and function as a visual cue to construction personnel where the boundaries of the  
8 construction activities exist.
  - 9 • The Army will mark and barrier off access routes to all construction projects that occur  
10 during the nesting season prior to April 1; all marking and barrier installations shall not  
11 occur between April 1 through September 15.
  - 12 • Project activities shall not generate any food or food waste that may attract corvids or  
13 other predators.

## 14 **2.7 Operations and Maintenance**

15 The fuel stations will operate seven (7) days a week to fulfill the military mission. Hours of  
16 operation depend on the type of fuel station: 1) Bulk stations normally operate between 6:30  
17 AM to 11:30 PM; or 2) Fuel Service Points are operated at all hours as required, with keyed  
18 access.

19 The stations will be maintained and operated in a safe, properly equipped, and free from or  
20 protected against exposure to hazardous materials and chemicals as set forth in all the  
21 applicable regulatory documents. JBLM Regulation No. 200-1, address safety considerations  
22 for chemicals and hazardous materials used in the work areas. The procedures outlined in the  
23 *Environmental Protection Plan for Operations, Maintenance and Aircraft Refueling Services*  
24 (Doss Aviation 2015) are intended to make personnel assigned work areas better and safer  
25 places to work, and to eliminate unnecessary injury and illness due to mishandling of hazardous  
26 material or chemicals.

27

### 3.0 Affected Environment and Environmental Consequences

This chapter presents baseline data for the affected environment and an assessment of the potential impacts, or environmental consequences that could result from implementation of the proposed action. The environmental resource areas analyzed in this EA include: Air Quality, Biological; Cultural Resources; Hazardous, Toxic, and Radioactive Materials (HTRW); and Utilities, Transportation, and Infrastructure.

Because potential impacts were considered to be negligible or nonexistent, the following resources were not evaluated in this EA:

**Geology and Hydrogeology:** The proposed construction would involve ground disturbance including excavation and re-grading. No UST will be installed in these projects. Overall, the proposed action would not result in significant long-term impacts to geology and hydrogeology as a result of the proposed action.

**Land Use:** All proposed work would occur within the installation limits on JBLM in accordance with the 2012 Master Plan. This master plan identifies Area Development Plans (ADP) that has goals and plans for specified areas of the base, similar to zoning in civilian communities. The North Fort (Lewis-North) is identified as a mixed-use town center utilizing a combination of green-space, barracks, shop-front retail, and community support facilities. The Lewis-Main projects are in ADPs with identified uses that include company operations and administrative facilities. Constraints to development in the area of GAAF primarily relate to aircraft operations. The project is intended to provide infrastructure that supports operational function and would thus not change existing land uses.

**Noise:** Existing noise sources within the project vicinity are primarily aviation and ground based training operations and vehicular traffic. Construction activities would have a short term, localized impact to air quality and noise due to the use of heavy machinery. Any effects would be short-term, occurring only during construction.

**Fisheries:** None of the proposed construction and demolition projects are adjacent to streams or water bodies; therefore, the proposed work would not have direct effects to fisheries or their habitat. With the use of BMPs during construction and operation of the facilities indirect effects to fisheries or their habitat will also be avoided.

**Water Quality:** The proposed action is not adjacent to any waterbodies. The design footprint of the fuel stations will include improvements to the sites to allow for on-site infiltration of stormwater. All proposed construction and operations of the facilities will need to comply with applicable stormwater requirements per construction, industrial, and/or JBLM's National Pollutant Discharge Elimination System (NPDES) stormwater permit as well as those outlined in the Washington State Department of Ecology's (WDOE) Stormwater Management Manual for Western Washington (2014). In addition, the next planned revision to the installation's Spill Prevention Control and Countermeasure Plan (SPCCP) will reflect the new configurations of the facilities of the proposed action, as appropriate.

**Wetlands:** Wetlands are not present in or near any of the proposed construction sites, and will not be affected by the proposed work.

1 **3.1 Air Quality**

2 **3.1.1 Regulatory Setting**

3 **Air Quality Standards.** Air quality is defined as the ambient air concentrations of specific  
 4 pollutants determined by the EPA, WDOE, and Puget Sound Clean Air Agency (PSCAA) to be  
 5 of concern to the health and welfare of the general public. The specific pollutants include the  
 6 criteria pollutants, hazardous air pollutants, and greenhouse gases (GHGs).

7 The criteria pollutants include ozone, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur  
 8 dioxide (SO<sub>2</sub>), particulate matter less than 10 microns in diameter (PM<sub>10</sub>), particulate matter less  
 9 than 2.5 microns in diameter (PM<sub>2.5</sub>), and lead. National Ambient Air Quality Standards  
 10 (NAAQS) have been established by the EPA for these criteria pollutants (EPA 2011a).

11 Washington State has adopted the NAAQS for all criteria pollutants except for SO<sub>2</sub>, for which  
 12 the state has adopted slightly more stringent requirements (Washington Administrative Code  
 13 173-474). Table 3-1 lists the NAAQS as well as applicable state air quality standards.

14 Depending on the type of pollutant, these maximum concentrations may not be exceeded at any  
 15 time, or may not be exceeded more than once per year.

16 The NAAQS provide definitions of the maximum concentrations of the criteria pollutants that are  
 17 considered safe, with an additional adequate margin of safety, to protect human health and  
 18 welfare. Short-term standards (1-, 8-, and 24-hour periods) are established for pollutants  
 19 contributing to acute health effects. Long-term standards (quarterly and annual averages) are  
 20 established for pollutants contributing to chronic health effects. Air Quality Control Regions  
 21 exist to assist in planning and monitoring to prevent air quality deterioration and achieve  
 22 attainment status with all NAAQS.

23 **Table 3-1. National and Washington State Ambient Air Quality Standards**

Pollutant	Averaging Time	Washington Standards	National Standards	
			Primary	Secondary
Carbon Monoxide (CO)	8-hour	9 ppm	9 ppm	None
	1-hour	35 ppm	35 ppm	None
Lead	Quarterly Average	None	1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup>
	Rolling 3-month Average	None	0.15 µg/m <sup>3</sup>	0.15 µg/m <sup>3</sup>
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Average	0.05 ppm	0.053 ppm	0.053 ppm
	1-hour	None	0.100 ppm	0.053 ppm
Particulate matter less than 10 microns in diameter (PM <sub>10</sub> )	Annual Arithmetic Mean	50 µg/m <sup>3</sup>	None	None
	24-hour	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
Particulate matter less than 10 microns in diameter (PM <sub>2.5</sub> )	Annual Arithmetic Average	None	15.0 µg/m <sup>3</sup>	15.0 µg/m <sup>3</sup>
	24-hour	None	35 µg/m <sup>3</sup>	35 µg/m <sup>3</sup>
Ozone	8-hour (2008 standard) <sup>(a)</sup>	None	0.075 ppm	0.075 ppm
	8-hour (1997 standard) <sup>(a)</sup>	None	0.08 ppm	0.08 ppm
Sulfur dioxide (SO <sub>2</sub> )	Annual Average	0.02 ppm	0.03 ppm	None
	24-hour	0.10 ppm	0.14 ppm	None
	3-hour	None	None	0.50 ppm

Pollutant	Averaging Time	Washington Standards	National Standards	
			Primary	Secondary
	1-hour	0.40 ppm <sup>(b)</sup>	0.075 ppm <sup>(c)</sup>	None
Total Suspended Particulates	Annual Geometric Mean	60 µg/m <sup>3</sup>	None	None
	24-hour average	150 µg/m <sup>3</sup>	None	None

Notes: µg/m<sup>3</sup>= micrograms per cubic meter; ppm = parts per million

<sup>(a)</sup> 8-hour ozone standard went into effect on September 16, 1997, but implementation is limited. The 1997 standard—and the implementation rules for that standard—will remain in place for implementation purposes as USEPA undertakes rulemaking to address the transition from the 1997 to the 2008 ozone standard.+

<sup>(b)</sup> Volume average for 1-hour period more than once per 1-year period. 0.25 ppm not to be exceeded more than two times in any 7 consecutive days.

<sup>(c)</sup> Final rule issued June 22, 2010. To attain this standard, the 3-year average of the 99<sup>th</sup> percentile of the daily maximum 1-hour average at each monitoring station within an area must not exceed 75 parts per billion. USEPA also revoked the annual and 24-hour primary standards when enacting the 1-hour standard.

Sources: USEPA 2011b; WDOE 2011.

**General Conformity Rule.** As described in 40 CFR Part 51, *Determining Conformity of General Federal Actions to State or Federal Implementation Plans* (the “General Conformity Rule”), all federal actions occurring in air basins designated in nonattainment or in a maintenance area must conform to an applicable State Implementation Plan (SIP). Since the southern portions of Pierce County, including JBLM, are not designated as a non-attainment or maintenance area by the EPA, a General Conformity Rule review will not be performed (EPA 2011b).

**3.1.2 Affected Environment**

Air quality is protected by federal regulations administered by the EPA; state regulations administered by WDOE; and the local clean air agency, PSCAA.

**3.1.2.1 Greenhouse Gas Emissions (Climate Change)**

GHGs are gases that trap heat in the atmosphere. These emissions occur from natural processes and human activities. The accumulation of GHGs in the atmosphere affects the earth’s climate. Scientific evidence indicates a trend of increasing global temperature over the past century due to an increase in GHG emissions from human activities. The most common GHGs emitted from natural processes and human activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). Combustive emission sources are a prime source of these GHG emissions. Additionally, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>) in the atmosphere threaten the public health and welfare of current and future generations. These GHGs are emitted primarily through human activities.

The CEQ issued draft guidance for considering GHG in the NEPA process. The guidance suggests that analyses of direct and indirect GHG emissions from proposed actions will be evaluated, and if alternatives would be reasonably anticipated to annually emit greater than 25,000 metric tons of CO<sub>2</sub>-equivalent (CO<sub>2</sub>-e), further evaluation should be considered (CEQ 2014; EPA 2011c).

**3.1.2.2 Emission Sources**

The PSCAA is responsible for issuing Notice of Construction (NOC) permits for proposed stationary sources. The NOC permits are required for stationary air contaminant-generating equipment and air pollution control equipment.

### 1 **3.1.3 Environmental Consequences**

2 This section evaluates potential air quality impacts resulting from implementation of the  
3 proposed action. Effects on air quality are based on estimated direct and indirect emissions  
4 associated with the action alternatives. The Region of Influence (ROI) for assessing air quality  
5 impacts is the air basin in which the project is located, the Puget Sound Air Basin.

6 Estimated emissions from a proposed federal action are typically compared with the relevant  
7 national and state standards to assess the potential for increases in pollutant concentrations.  
8 Air quality impacts would be considered significant if the action alternatives directly or indirectly  
9 produce significant levels of emissions (e.g. more than 25,000 metric tons of CO<sub>2</sub> a year) that  
10 would be the primary cause of, or would significantly contribute to, a violation of state or federal  
11 ambient air quality standards.

#### 12 *3.1.3.1 No-Action Alternative*

13 Under the No-Action Alternative, construction of the new fueling stations and demolition of the  
14 old fuel stations would not occur and there would be no change to baseline air quality.  
15 Therefore, no significant impacts to air quality or air resources would occur with implementation  
16 of the No-Action Alternative.

#### 17 *3.1.3.2 Construction of new fuel stations and Demolition of old fuel stations*

18 Temporary increases in air pollution would occur during the implementation of the proposed  
19 action; however, the impacts to air quality are anticipated to be localized and negligible, lasting  
20 only as long as demolition and construction activities occur.

21 Effects from vehicular emissions are thoroughly described in the 2010 *Growth and Force*  
22 *Structure Realignment EIS* (JBLM 2010, Chapter 4.7). Overall, with adequately sized  
23 infrastructure, it is anticipated that there would be a reduction in vehicle idle times as compared  
24 to the No-Action Alternative.

25 The fuel stations are being designed such that operations would adhere to the NAAQS for all  
26 criteria pollutants as well as the Washington State requirements for SO<sub>2</sub>, as described above  
27 and in Table 3-1. Operation of the proposed new fuel stations including the fuel dispensing  
28 equipment would be designed to meet current industrial standards to prevent accidental spill  
29 and release of volatile organic compound emissions. An application for the notice of  
30 construction would be prepared and submitted to the PSCAA, prior to the start of construction.  
31 The application would be prepared by the contractor and fully reviewed by JBLM Specific  
32 calculations for volatile organic compound emissions would be made as part of the application  
33 to the PSCAA once full design and construction details are available.

### 34 **3.2 Biological Resources**

35 For the purposes of this EA, biological resources are divided into three major categories: (1)  
36 vegetation, (2) terrestrial wildlife, and (3) special-status species. Special-status species are  
37 those species listed as threatened or endangered under the Endangered Species Act (ESA),  
38 and species afforded federal protection under the Migratory Bird Treaty Act (MBTA), or Bald and  
39 Golden Eagle Protection Act.

#### 40 **3.2.1 Affected Environment**

##### 41 *3.2.1.1 Vegetation and Habitat*

42 The six construction or demolition project sites are in a few distinct habitat types. Two of the  
43 fuel points (Bldgs 03138 and 09635) are in industrial areas of JBLM that do not have any natural

1 habitat features in that they are covered entirely by hard surfaces (pavement, buildings, and  
2 other structures).

3 Two of the sites (GO-CO and Lewis-Main fuel points) are partially covered by hard surfaces, but  
4 have some natural forest habitat features. The GO-CO site is immediately adjacent to  
5 coniferous forest and restored natural areas to the east and south. The Lewis-North site has  
6 mature Douglas-fir (*Pseudotsuga menziesii*), open space covered with Scotch broom (*Cytisus*  
7 *scoparius*) and blackberries (*Rubus armeniacus*), and unimproved roads. The sites do not have  
8 open water consisting of streams or wetlands.

9 Vegetation at the GAAF site is mainly short grass prairie type habitat, except for the eastern  
10 portion of the project site (next to 2<sup>nd</sup> Division Drive) that contains approximately twenty 50-year-  
11 old Douglas-fir trees. No open water streams or wetlands occur in or around GAAF.

### 12 3.2.1.2 Terrestrial Wildlife

13 Wildlife Resources on JBLM are thoroughly discussed in the 2010 *Fort Lewis Army Growth and*  
14 *Force Structure Realignment EIS* (JBLM 2010) and the 2011 *Realignment, Growth, and*  
15 *Stationing of Army Aviation Assets Programmatic EIS* (AEC 2011) and are incorporated herein  
16 by reference.

17 In general, wildlife found in the industrial areas of JBLM are those habituated to living in an  
18 urban environment with minimal natural features. These include rodents (rats, mice, squirrels,  
19 and chipmunks), raccoons (*Procyon lotor*), and coyotes (*Canis latrans*). Birds found in the  
20 industrial areas are predominately pigeons, sparrows, and juncos.

21 The forested areas are home to more numerous wildlife species including resident and  
22 migratory birds, and several species of mammals. Smaller song birds include black-capped  
23 chickadees (*Poecile atricapillus*), red-breasted nuthatches (*Sitta canadensis*), and brown  
24 creepers (*Certhia Americana*). Raptors known to nest in coniferous forests include red-tailed  
25 hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), and the sharp-shinned hawk (*A.*  
26 *striatus*). Upland game birds, bluebirds, thrushes, flycatchers, and warblers use the forest edge.  
27 The forests provide cover and forage for a variety of mammal species including Columbia black-  
28 tailed deer (*Odocoileus hemionus columbianus*), raccoon, coyote, black bear (*Ursus*  
29 *americanus*), various bat species, Townsend chipmunk (*Tamias townsendii*), and northern flying  
30 squirrel (*Glaucomys sabrinus*).

### 31 3.2.1.3 Special-Status Species

32 The only Endangered Species Act (ESA) listed species found on the six project sites is the  
33 streaked horned lark (*Eremophila alpestris strigata*) which is dependent on the open grassland  
34 habitats of GAAF. This species was federally listed as threatened on November 4, 2013. In  
35 that same listing, critical habitat for the species was designated for protection. The U.S. Fish  
36 and Wildlife Service (USFWS) determined that lands on Joint Base Lewis McChord are subject  
37 to the base's Integrated Natural Resources Management Plan (INRMP) and that conservation  
38 efforts identified in the INRMP will provide a conservation benefit to the streaked horned lark  
39 (JBLM 2012a). Therefore, lands within this installation are exempt from critical habitat  
40 designation under section 4(a)(3) of the Act. The INRMP designates lands that were proposed  
41 as critical habitat, though exempted per Section 4(a)(3)(B)(i) of ESA, as Priority Habitat. The  
42 proposed projects on the airfield are located near areas occupied by nesting streaked horned  
43 larks, and some are located within priority habitat areas for this species.

44 Bald eagles (*Haliaeetus leucocephalus*) are protected by both state and federal law. Bald  
45 eagles are not known to nest on any of the project sites. The closest documented bald eagle

1 nest site to any one of the proposed construction sites is located 1.3 miles away along the  
 2 shores of American Lake (JBLM 2012a, and WDFW 2015).

3 **3.2.2 Environmental Consequences**

4 Impacts to biological resources would be considered significant if there was substantial removal  
 5 of vegetation that reduced high value habitat areas for wildlife and if there were direct impacts to  
 6 protected or endangered species.

7 *3.2.2.1 No Action Alternative*

8 Under the No-Action Alternative, construction of the new fueling stations and demolition of the  
 9 old fuel stations would not occur and there would be no change to biological resources due to  
 10 the proposed action and existing conditions are expected to persist.

11 *3.2.2.2 Construction of new fuel stations and Demolition of old fuel stations*

12 Construction of the military fuel stations will require felling trees, clearing underbrush, and  
 13 removing grass on the three construction sites. Approximately 2.8 acres of grassland habitat  
 14 and 7.8 acres forested or park-like habitat would be lost if all three new fuel stations are  
 15 constructed (Table 3-2). Demolition of the GO-CO fuel site includes pavement removal and  
 16 revegetation with grass or native trees and shrubs as part of the site rehabilitation  
 17 (approximately 3.0 acres). AR 200-1, 4-3:d.8.(m), requires that “agricultural and forest products  
 18 are not given away, abandoned, carelessly destroyed, used to offset contract costs or traded for  
 19 services, supplies, or products or otherwise improperly removed”. For the removal of timber,  
 20 advance coordination would occur with JBLM Department of Public Works Forestry.

21

22

**Table 3-2. Vegetation to be removed with proposed action**

Project site	Acres Grasslands*	Acres Trees/forested*
Lewis-Main Fuel Service Point	0	3.1
Lewis-North Retail Station	0	4
Demolition of GO-CO Fuel Source Point (Bldg 1150)	0	0
GAAF Bulk Fuel and Hot Refuel	2.8	0.7
Demolition of Logistics Center (Bldg 09635)	0	0
Demolition of Consolidated Fuel Point (Bldg 03138)	0	0

23

\* Approximate number of acres

24

25 In a study by Pearson (2003), researchers found that larks on airfields appeared to become  
 26 accustomed to airplane traffic. Streaked horned larks nesting on GAAF presumably are  
 27 accustomed to a certain level of disturbance associated with and routine airfield use and  
 28 maintenance activities. Larks may be temporarily disturbed by vehicle movement or  
 29 construction noise, but the amount of disturbance expected from these activities is not  
 30 anticipated to be significantly greater than routine disturbance levels associated with airfield  
 31 operations. While the majority of the construction is occurring on paved areas or other  
 32 unsuitable habitats (forested, paved, or developed with buildings), a loss of 2.0 acres of suitable  
 33 streaked horned lark habitat is expected. These areas are grassy areas that will be converted  
 34 to pavement. Portions of the overall project will pave areas that are used by streaked horned  
 35 larks. Streaked horned larks are known to nest in the immediate area, and construction of the  
 36 proposed work will overlap two nesting seasons. With implementation of conservation

1 measures (Section 2.6.3), direct effects to nests can be avoided and indirect effects to the larks  
 2 would be minimized. The project also entails cutting down a stand of Douglas firs along 2<sup>nd</sup>  
 3 Division Drive which will remove perch sites for predatory birds. The roofs of the new  
 4 structures, office building and fuel depot canopy could provide perches, but at a lower height.  
 5 A Supplemental Biological Assessment (S-BA), which thoroughly discusses the proposed  
 6 project on GAAF and the effects to streaked horned larks, was prepared and sent to the  
 7 USFWS for their concurrence on 18 November 2015. Pending any future design modifications  
 8 (i.e. stormwater facilities) to the proposed site, the S-BA may require an amendment and re-  
 9 submittal prior to final concurrence.

10 **3.3 Cultural and Historical Resources**

11 **3.3.1 Affected Environment**

12 The area of potential effect (APE) for cultural resources is the geographic area or areas within  
 13 which an undertaking (project, activity, program or practice) may cause changes in the  
 14 character or use of any historic properties present. The APE is influenced by the scale and  
 15 nature of the undertaking and may be different for different kinds of effects caused by the  
 16 undertaking. For this proposed action, the Army determined that the APE for historic properties  
 17 includes the construction footprints as well as surrounding areas as follows in table.

18

19

**Table 3-3. APE of Historic Properties**

Site	Construction Footprint	APE including surrounding areas (all areas approximate)
GO-CO Fuel Source Point	3 acres	5 acres
Lewis-North Fuel Source Point	4 acres	8 acres
Building 03138 Consolidated Fuel Point	1.3 acres	1.3 acres
Gray Army Air Field Hot Refuel	12.5 acres	300+ acres (includes the entire airfield)
Lewis-Main Fuel Source Point (bldg. 3387)	6 acres	6 acres
Logistic Center Consolidated Fuel Service Point (bldg. 09635)	2 acres	200+ acres (includes the entire Logistic Center complex)

20

21 On GAAF, the area was surveyed for earlier construction work and no historic properties were  
 22 found (Sadler 2004). The Integrated Cultural Resources Management Plan also identified the  
 23 proposed project APE as one which has been significantly disturbed for decades thus there is  
 24 not potential for eligible cultural resources to be present within the APE. Consultation with the  
 25 Washington State Historic Preservation Office (SHPO) on historic properties is on-going.

### 1 3.3.2 Environmental Consequences

2 Impacts to cultural and historical resources would be considered significant if the proposed  
3 action would affect archeological or cultural resources identified as historic and significant to the  
4 local community or tribes.

#### 5 3.3.2.1 No-Action Alternative

6 Under the No-Action Alternative, construction of the new fueling stations and demolition of the  
7 old fuel stations would not occur and there would be no change to cultural and historical  
8 resources due to the proposed action. Therefore, no significant impacts to cultural and  
9 historical resources would occur with implementation of the No-Action Alternative.

#### 10 3.3.2.2 Construction of new fuel stations and Demolition of old fuel stations

11 The *Integrated Cultural Resources Management Plan* (JBLM 2012b) identified the proposed  
12 project APEs as those which has been significantly disturbed for decades thus there is not  
13 potential for eligible cultural resources to be present within the APE. The proposed demolition  
14 of fuel stations and construction of new fuel stations would have no adverse effects to historic  
15 resources.

### 16 3.4 Hazardous, Toxic, and Radioactive Wastes

17 The US Army is obligated under Army Regulation (AR) 200-1 to assume responsibility for the  
18 reasonable identification and evaluation of all HTRW contamination within the vicinity of  
19 proposed actions. An ASTM E 1527-13 Phase 1 Environmental Site Assessment (ESA) has  
20 been completed for the proposed fuel station projects (USACE 2015a and 2015b).

#### 21 3.4.1 Affected Environment

22 A Phase I Environmental Site Assessment of Properties at Joint Base Lewis-McChord,  
23 Washington, was performed in conformance with the scope and limitations of ASTM Standard  
24 E1527-13:

- 25 • GO-CO Fuel Source Point located near Building B1150 and the intersection of South  
26 Drive and 7<sup>th</sup> Street (Lewis North, JBLM)
- 27 • Lewis-North Fuel Service Point near the intersection of South Drive/A Street, and 8th  
28 Street/Vancouver Road (Lewis North JBLM)
- 29 • Lewis-Main Consolidated Fuel Point located near Building 3138 on 4th Division Drive  
30 between Collier Avenue and Evergreen Avenue (Lewis-Main, JBLM)
- 31 • Lewis-Main Fuel Service Point (Superstation) located near the intersection of Hillside  
32 Drive and Collier Avenue (Lewis-Main, JBLM)
- 33 • Log Center Consolidated Fuel Service Point located near Building 9635 and the  
34 intersection of South L Street and Prescott Avenue (Logistics Center, JBLM)

35 The US Army Corps of Engineers Seattle District concludes that recognized environmental  
36 conditions posing risk to human or ecological health within the property boundaries were not  
37 identified during this investigation, except for the following:

- 38 • Releases of petroleum product are known to have occurred at all of the Properties  
39 except for the Lewis-Main Fuel Service Point footprint. For all known incidents, cleanup  
40 and remediation have been completed. Remaining soils at petroleum release locations  
41 have tested below regulatory limits for petroleum contamination. However, unknown or  
42 residual petroleum contamination at the Properties is possible due the long history of the

- 1 Properties as refueling locations. Unknown petroleum contamination is possible at the  
 2 Lewis-Main Fuel Service Point due to its long history as a motor pool prior to demolition.
- 3 • All Properties are located within the Tacoma Smelter Plume area. Soils at the site may  
 4 contain lead and arsenic derived from airborne particulates settling out of the  
 5 atmosphere during the many years of smelter operation. Soils at the Properties must be  
 6 tested for lead and arsenic content to determine management, reuse, or disposal options  
 7 (JBLM, 2015).
  - 8 • Properties at Lewis North (GO-CO Fuel Source Point and Lewis-North Fuel Service  
 9 Point) are located on the southern boundary of a former practice mortar range. Since  
 10 these properties have a history of prior ground disturbance, the probability UXO is  
 11 reduced. Pending determination of final construction limits, on-call construction support  
 12 and/or Military Munitions Recognition Training (per the JBLM Safety Office) may be  
 13 required.
  - 14 • The Logistic Center Consolidated Fuel Service Point is located above the  
 15 trichloroethylene (TCE)-contaminated groundwater plume emanating from the Logistic  
 16 Center superfund site. Buildings constructed within the plume footprint are at risk of  
 17 exposing occupants to volatile organic compounds via vapor intrusion. Buildings  
 18 designed for human occupancy should utilize vapor intrusion resistant or mitigating  
 19 architectural features.
  - 20 • Releases of petroleum product (JP-8) are known to have occurred at GAAF. For all  
 21 known incidents, cleanup and remediation have been completed. Remaining soils at  
 22 petroleum release locations have tested below regulatory limits for petroleum  
 23 contamination. However, unknown or residual petroleum contamination at GAAF is  
 24 possible due to the long history of the airfield as an aircraft refueling location.
  - 25 • GAAF is located within the Tacoma Smelter Plume area. Soils at the airfield may  
 26 contain lead and arsenic derived from airborne particulates settling over the property  
 27 during the many years of smelter operation. Soils at GAAF should be tested for lead  
 28 and arsenic content to determine management, reuse, or disposal options (JBLM, 2015)

29 A summary of recognized environmental hazard conditions are in Table 3-4 below.

30 **Table 3-4. Summary of Recognized Environmental Hazard Conditions**

Property	Petroleum Release	Located within Tacoma Smelter Plume Area	UXO	Located within Log Center TCE groundwater plume area
GO-CO Fuel Source Point	X	X	X	
Lewis-North Fuel Service Point	X	X	X	
Lewis-Main Consolidated Fuel Point	X	X		
Lewis-Main Fuel Service Point		X		
Logistics Center Consolidated Fuel Service Point	X	X		X
Gray Army Air Field	X	X		

31 **3.4.2 Environmental Consequences**

32 Impacts to HTRW resources would be considered significant if environmental conditions were  
 33 created that pose risks to human or ecological health within the project boundaries.

#### 1 3.4.2.1 *No-Action Alternative*

2 Under the No-Action Alternative, construction of the new fueling stations and demolition of the  
3 old fuel stations would not occur. Therefore, no significant impacts to HTRW resources would  
4 occur with implementation of the No-Action Alternative.

#### 5 3.4.2.2 *Construction of new fuel stations and Demolition of old fuel stations*

6 As described above in Section 2.5 demolition activities would involve removal of previously  
7 utilized ASTs and USTs, associated piping and retail dispensers. It is possible that some  
8 residual petroleum exists within this infrastructure. Removal would be done in a manner to  
9 minimize risks that any HTRW substances are released. Mitigation measures and BMPs would  
10 be in place to ensure that in the event of a minor release it is contained and cleaned-up. All  
11 removed infrastructure would be disposed of at an approved off-site facility. The proposed  
12 construction and demolition would not require the use of hazardous materials other than  
13 common materials used by construction equipment (motor oil, lubricant, coolant, fuel). With the  
14 implementation of the BMPs outlined in Section 2.9 for construction as well as operations and  
15 management, the proposed project would not generate conditions that pose risks to human  
16 health or ecological health, therefore impacts are less than significant.

### 17 **3.5 Utilities, Transportation, and Infrastructure**

#### 18 **3.5.1 Affected Environment**

19 At the bulk storage/retail fuel facilities, the recent Installation Status Report indicates the land  
20 vehicle capacity of the current infrastructure can efficiently service only 15 percent of the units  
21 that call JBLM home. Compared to the UFC 3-460-01 standard of having a dispenser for every  
22 100 vehicles, facilities at JBLM are undersized. The undersized facilities promote a safety  
23 hazard as tactical vehicles block traffic by queuing on adjacent streets while waiting for service.  
24 Units are refueling in their motor pools, which increases environmental risk for Commanders  
25 since the facilities aren't designed to support those types of operations (e.g., level of spill  
26 control).

27 From a bulk perspective, units are limited to fueling two tanker trucks at a time at JBLM's only  
28 bulk loading facility (9635/9636). For the brigades located on Lewis-North, this round trip task  
29 takes over an hour and requires the tanker trucks to travel through the cantonment area.  
30 Facility 9635/9636 has additional UFC 3-460-01 and NFPA 30A violations: (1) bulk and retail  
31 tanks tied together performing bulk and retail functions and (2) the bulk tanks at this facility are  
32 located too close (less than 50') to the active railway spur. Current fueling points are not  
33 designed efficiently for either bulk or retail functions.

34 In addition to traffic concerns, locating the fuel stations must consider both above ground, and  
35 below ground utilities (electrical lines, telecommunication lines, fresh water, and waste water  
36 pipes).

#### 37 **3.5.2 Environmental Consequences**

##### 38 3.5.2.1 *No-Action Alternative*

39 Under the No-Action Alternative, construction of the new fueling stations and demolition of the  
40 old fuel stations would not occur. The installation would not comply with UFC 3-460-01 and  
41 violations would not be corrected. Extended travel times and undersized facilities would remain  
42 the status quo.

1    3.5.2.2 *Construction of new fuel stations and Demolition of old fuel stations*

2    Under this alternative, construction and demolition would result in temporary and permanent  
3    impacts to utilities, transportation and infrastructure. Temporary impacts include road closures  
4    and/or detours and presence of construction vehicles on the roadways within JBLM. Permanent  
5    impacts include alteration in refueling routes as a result of the construction of new facilities.  
6    Properly sized facilities would reduce wait times and potential for traffic blockages. Temporary  
7    impacts to transportation, utilities and public services would be highly localized, and are not  
8    expected to be significant.

9    **3.6 Summary of Potential Environmental Consequences**

10   Implementation of the proposed action would not constitute a "major federal action significantly  
11   affecting the quality of the human environment" when considered individually or cumulatively in  
12   the context of NEPA, including both direct and indirect impacts (Table 3-7). Therefore, this EA  
13   supports a FONSI for the Preferred Alternative and the preparation of an EIS is not required.

## 1 **4.0 Cumulative Impacts**

2 Evidence is increasing that the most devastating environmental effects may result not from the  
3 direct effects of a particular action, but from the combination of individually minor effects of  
4 multiple actions over time (CEQ 1997). Cumulative effects address the incremental  
5 environment impacts of the proposed action, together with impacts of past, present, and  
6 reasonably foreseeable future actions. The cumulative effects address the impacts from projects  
7 that may be individually minor, but result in collectively significant impacts when taking into  
8 account actions occurring over a period of time (40 CFR §1508.7). As such, they include the  
9 impacts of this fuel facilities project considered in conjunction with current and future projects  
10 constructed or planned at JBLM and the surrounding area.

11 Each resource, ecosystem, and human community must be analyzed in terms of its ability to  
12 accommodate additional effects, based on its own time and space parameters. Therefore,  
13 cumulative effects analysis normally will encompass a Region of Influence or geographic  
14 boundaries beyond the immediate area of the proposed action, and a period including past  
15 actions and foreseeable future actions, to capture these additional effects.

16 For the proposed action to have a cumulatively significant impact to an environmental resource,  
17 two conditions must be met. First, the combined effects of all identified past, present, and  
18 reasonably foreseeable projects, activities, and processes on a resource, including the effects of  
19 the proposed action, must be significant. Second, the proposed action must make a substantial  
20 contribution to that significant cumulative impact. In order to analyze cumulative effects, a  
21 cumulative effects region must be identified for which effects of the proposed action and other  
22 past, present, and reasonably foreseeable actions would occur.

23 Current projects at JBLM that are currently ongoing and/or would occur in the near future are  
24 primarily maintenance driven, including infrastructure repairs, and building construction. For  
25 example, removal of Clayton Hill at GAAF in preparation for future construction of a Regional Air  
26 Support Air Support Maintenance complex is proposed. Also, the widening of Interstate 5  
27 through JBLM is scheduled for 2020 and would likely contribute noise and construction related  
28 emissions within JBLM and the surrounding area.

29 The negative environmental effects of the DLA Fueling Facilities construction and demolition are  
30 temporary and minor and are associated primarily with the actual construction of the project.  
31 The combination of BMPs and mitigation measures reduce the cumulative, short-term (e.g.  
32 construction related) impacts to an insignificant level. More importantly, the beneficial effects,  
33 particularly to transportation and traffic, compensate for these short-term negative effects.  
34 Thus, the proposed fueling facilities project would not contribute significantly to cumulative  
35 effects within JBLM.

1 **5.0 Other Considerations Required by NEPA**

2 In accordance with 40 CFR Section 1502.16(c), analysis of environmental consequences shall  
 3 include discussion of possible conflicts between the proposed action and the objectives of  
 4 Federal, regional, State and local land use plans, policies, and controls. Table 5-1 identifies the  
 5 principal federal and state laws and regulations that are applicable to the proposed action, and  
 6 describes briefly how compliance with these laws and regulations would be accomplished.

7  
 8

**Table 5-1. Principal Federal and State Laws Applicable to the Proposed Action**

Federal, State, Local, and Regional Land Use Plans, Policies, and Controls	Status of Compliance
National Environmental Policy Act (NEPA) (42 USC §4321 <i>et seq.</i> ); CEQ NEPA implementing regulations (40 CFR 1500-1508;	Preparation of this EA has been conducted in compliance with NEPA and in accordance with CEQ regulations and the Army's NEPA procedures.
Clean Air Act (42 USC §7401 <i>et seq.</i> )	Temporary increases in air pollution would occur during the implementation of the proposed action; however, the impacts to air quality are anticipated to be localized and negligible, lasting only as long as demolition and construction activities occur. The fuel stations are being designed such that operations would adhere to the NAAQS for all criteria pollutants as well as the Washington State requirements for SO <sub>2</sub> . The proposed action is not anticipated to change air quality attainment status or conflict with attainment and maintenance goals established in the SIP. Operation of the proposed new fuel stations including the fuel dispensing equipment would be designed to meet current industrial standards to prevent accidental spill and release of volatile organic compound emissions. An application for the notice of construction would be prepared and submitted to the PSCAA, prior to the start of construction. The application would be prepared by the contractor and fully reviewed by JBLM
Clean Water Act (Sections 401 and 404, 33 USC 1251 <i>et seq.</i> )	Section 402 of the Act requires a NPDES permit and the associated implementing regulations for General Permit for Discharges from Large and Small Construction Activities for construction disturbance over one acre. This project would have land disturbance of over one acre and therefore a NPDES permit would be obtained by the contractor and they would prepare and implement a Stormwater Pollution Prevention Plan.
National Historic Preservation Act (Section 106, 16 USC 470 <i>et seq.</i> )	The NHPA requires federal agencies to identify, evaluate, inventory, and protect NRHP resources (or resources that are potentially eligible for listing in the NRHP) on properties that they control (54 U.S.C. 306108 <i>et seq.</i> ). The Army determined that the proposed action would not adversely affect properties eligible for inclusion in the NRHP (Appendix B). In accordance with Section 106 of the NHPA, the Army initiated consultation with the Washington SHPO in December 2015, requesting concurrence on the Army's determination of no adverse effects on properties eligible for inclusion in the NRHP.

Federal, State, Local, and Regional Land Use Plans, Policies, and Controls	Status of Compliance
Endangered Species Act (ESA) (16 USC 1531 <i>et seq.</i> )	In accordance with Section 7 of the ESA, the Army prepared a supplemental BA that was submitted to the USFWS on 18 November 2015. Based on the effects analysis completed in the supplemental BA, the distance of the proposed construction from nests and recent sightings and timing of construction, the Army determined that the DLA fuel facilities project may affect, but is not likely to adversely affect streaked horned lark. Implementation of conservation measures and BMPs outlined in Section 2.6 would minimize impacts and lessen any take associated with the proposed project. The Army is consulting with USFWS regarding these potential effects. The ESA consultation documents are provided in Appendix A.
Migratory Bird Treaty Act (16 USC 703-712)	Approximately 2.8 acres of grassland habitat and 7.8 acres forested or park-like habitat would be lost with construction of the three new fuel stations. Demolition of the GO-CO fuel site includes pavement removal and would be revegetated with grasses or native trees and shrubs as part of the site rehabilitation (approximately 3.0 acres). Clearing of existing trees and shrubs will be accomplished prior to April 1 or after September 1 to minimize adverse effects to nesting birds.
Bald and Golden Eagle Protection Act (16 USC 668-668d)	Bald eagles are not known to nest on any of the project sites. The closest documented bald eagle nest site to any one of the proposed construction sites is located 1.3 miles away along the shores of American Lake; therefore the proposed work will have no effect to bald eagles.
Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-income Populations	Since no adverse human health or environmental effects are anticipated to result from the project, the Army has determined that no disproportional adverse impacts to low-income or minority populations would occur.
Executive Order 12088, Federal Compliance with Pollution Control Standards	Phase 1 Environmental Site Assessments were conducted in accordance with ASTM International (ASTM) Standard Practices (ASTM E1527 - 13) to identify any potential of risk to human or ecological health due to historical activities. The proposed project will be designed, constructed, and operated in compliance with the applicable pollution control standards identified in §1-102 of the EO, as well as will obtain the necessary permits required under the Clean Air Act and Clean Water Act. Therefore, the proposed project is in compliance with the EO.
Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks	Places that children generally gather include schools, parks, recreational facilities and day care centers. The proposed action is located on an active military airfield, adjacent to military training areas, or within the confines of the industrial areas. Therefore the proposed action would not generate any disproportionate environmental health or safety risks to children.
Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds	The proposed action would not result in measurable negative effects on migratory bird populations as construction impacts are short-term and localized.

1 **5.1 Irreversible or Irretrievable Commitment of Natural or Depletable Resources**  
2 **(40 CFR Section 1502.16)**

3 Resources that are irreversibly or irretrievably committed to a project are those that are used on  
4 a long-term or permanent basis. This includes the use of non-renewable resources such as  
5 metal and fuel, and natural or cultural resources. These resources are irretrievable in that they  
6 would be used for this project when they could have been used for other purposes. Human  
7 labor is also considered an irretrievable resource. Another impact that falls under this category  
8 is the unavoidable destruction of natural resources that could limit the range of potential uses of  
9 that particular environment.

10 Implementation of the proposed action would involve human labor, the consumption of fuel, oil,  
11 and lubricants for construction vehicles and loss of natural resources. These resource  
12 commitments are necessary in order for JBLM to have adequate infrastructure to ensure that  
13 soldiers are ready for immediate deployment world-wide in support of the National Defense  
14 Mission. Implementation of the proposed action would not result in significant irreversible or  
15 irretrievable commitment of resources.

16 **5.2 Relationship between Local Short-Term Use of the Human Environment and**  
17 **Maintenance and Enhancement of Long-Term Natural Resource Productivity**  
18 **(40 CFR Section 1502.16)**

19 NEPA requires an analysis of the relationship between a project's short-term impacts on the  
20 environment and the effects that these impacts may have on the maintenance and  
21 enhancement of the long-term productivity of the affected environment. Impacts that narrow the  
22 range of beneficial uses of the environment are of particular concern. This refers to the  
23 possibility that choosing one development site reduces future flexibility in pursuing other  
24 options, or that using a parcel of land or other resources often eliminates the possibility of other  
25 uses at that site.

26 In the short-term, effects to the human environment with implementation of the proposed action  
27 would primarily relate to the construction activity itself. The construction and demolition of  
28 fueling facilities and subsequent operations would not significantly impact the long term natural  
29 resource productivity of the area. The proposed action would not result in any impacts that  
30 would significantly reduce environmental productivity or permanently narrow the range of  
31 beneficial uses of the environment.

32 **5.3 Means to Mitigate and/or Monitor Adverse Environmental Impacts (40 CFR**  
33 **Section 1502.16(h))**

34 The Proposed Action would not result in any significant adverse environmental impacts with  
35 implementation of the BMPs and mitigation measures to avoid, minimize and/or mitigate  
36 impacts as described above in Section 2.6.

37 **5.4 Any Probable Adverse Environmental Effects That Cannot Be Avoided and**  
38 **Are Not Amenable To Mitigation**

39 This EA has determined that the proposed action would not result in any significant impacts;  
40 therefore, there are no probable adverse environmental effects that cannot be avoided or are  
41 not amenable to mitigation.

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1 **7.0 Appendices**

2 Appendix A – Endangered Species Act consultation

3 Appendix B – National Historic Preservation Act, Section 106 consultation

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